Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously presented) A method of magnetic resonance imaging of a sample, said method comprising:
i) administering a hyperpolarised MR imaging agent comprising non-zero nuclear spin nuclei into the sample;
ii) exposing the sample to a radiation at a frequency selected to excite nuclear spin transitions in said non-zero nuclear spin nuclei;
iii) detecting MR signals from the sample and utilising spectral-spatial excitation, in combination with line scanning, point scanning and/or steady state imaging techniques; and
iv) optionally generating an image, physiological data or metabolic data from said detected signals.

2. Canceled.

3. Canceled.

4. (Previously presented) The method as claimed in claim 1 wherein for steady state imaging FISP or PSIF pulse sequences with high flip angles are used.

5. (Previously presented) The method as claimed in claim 1 wherein said non-zero nuclear spin nuclei are selected from the group consisting of ^{1}H, ^{3}He, ^{3}Li, ^{13}C, ^{15}N, ^{19}F, ^{29}Si, ^{31}P and ^{129}Xe.

6. (Previously presented) The method as claimed in claim 1 wherein said non-zero nuclear spin nuclei are selected from the group consisting of ^{13}C and ^{15}N, especially ^{13}C nuclei.

7. (Previously presented) The method as claimed in claim 1 wherein said MR imaging agent is artificially enriched with nuclei having a T_1 relaxation time of more than 5s.

8. (Original) The method as claimed in claim 6 wherein the MR imaging agent has an effective nuclei ^{13}C polarisation of more than 1%.

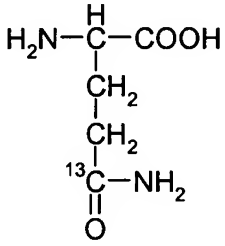
9. (Original) The method as claimed in claim 6 wherein the MR imaging agent is ^{13}C enriched at carbonyl or quaternary carbon positions.

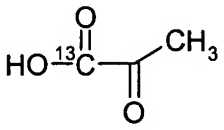
10. (Original) The method as claimed in claim 9 wherein said ^{13}C enriched compound is deuterium labelled adjacent said ^{13}C nucleus.

11. (Previously presented) The method as claimed in claim 6 wherein said ^{13}C nuclei are surrounded by one or more non-MR active nuclei or entities selected from the group consisting of O, S, C or a double or triple bond.

12. Canceled.

13. (Previously presented) The method as claimed in claim 1 wherein said imaging agent comprises a compound selected from the following:





14. (New). The method as claimed in claim 3 wherein said non-zero nuclear spin nuclei are ^{13}C nuclei.

15. (New). The method as claimed in claim 1 wherein the sample is a human or non-human animal body.